

Orthopedic Impairments

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Definition

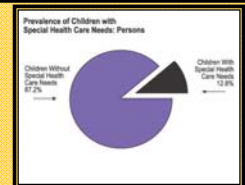
A severe orthopedic impairment that adversely affects a child's developmental or educational performance



What is Orthopedics?

- "Orthopedics is the branch of medical science concerned with disorders or deformities of the spine and joints" (<http://wordnetweb.princeton.edu/perl/webwn?s=orthopedics>)

Prevalence



The U.S. department of education reports 5,971,495 students receiving special education services in the 2003-2004 school year. Of that number, roughly 1.1%, or 68,188 students, received special education services based on a classification of orthopedic impairments.

Causes

- Examples of potential causes of orthopedic impairment include genetic abnormality, disease, injury, birth trauma, amputation, burns, or other causes.
- Congenital anomaly (clubfoot, absence of some member, spina bifida, etc.)
- Impairments caused by disease (poliomyelitis, bone tuberculosis, etc.)
- Impairments from other causes (cerebral palsy, amputations, and fractures or burns that cause contractures).



Types



- Bone diseases
- Cerebral palsy
- Muscular Dystrophy
 - Scoliosis
 - Spina Bifida

Cerebral Palsy

- Physical impairment that affects movement.
- Four types:
 - Spastic, athetoid, ataxic, and any combination of those.
- 1 in 400 births (most common in public schools)

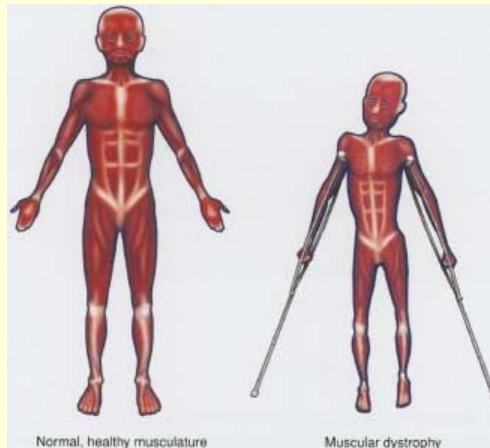


Cerebral Palsy

- <http://www.youtube.com/watch?v=IFMLL6A7K0U>

Muscular Dystrophy

- Muscular dystrophy is a disease that weakens the muscles.
- There are 43 types of muscular dystrophy, most of which are caused by alterations in specific genes.
- The most common type is Duchenne muscular dystrophy, and it only affects boys.
- It is a genetic disease passed from mother to son or it can arise in a young boy due to a spontaneous genetic mutation.



Side effects

- Muscle Weakness
- Paralysis
- Involuntary movements/ abnormal reflexes
- Poor short term memory
- Easily distracted
- Poor attention, organization, sequencing time, generalization, motivation, coordination.



How it is Diagnosed



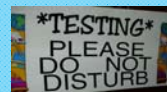
1. Medical or health assessment statement. A medical statement or a health assessment statement indicating a diagnosis of an orthopedic or neuromotor impairment or a description of the motor impairment;
2. Motor assessment. A standardized motor assessment, including the areas of fine motor, gross motor and self-help, when appropriate, by a specialist knowledgeable about orthopedic or neuromotor development;
3. Other: (A) Any additional assessments necessary to determine the impact of the suspected disability: (i) On the child's educational performance for a school-age child; or (ii) On the child's developmental progress for a preschool child. (Logsdon)

Minimum Criteria for a child to be diagnosed

1. The child has a motor impairment that results in deficits in the quality, speed or accuracy of movement. These deficits must be documented by a score of two or more standard deviations below the mean in fine motor skills, gross motor skills, or self-help skills, or functional deficits in at least two of these three motor areas; and
2. The child's condition is permanent or is expected to last for more than 60 calendar days. (Logsdon)



Educational Considerations



TESTING

1. Allow more time for the student to complete the activities.
2. Provide a separate place for the test if necessary.
3. Give completely oral tests or completely written tests, whichever is more appropriate to the students needs.
4. Allow students to tape record answers to tests or type answers, as needed.
5. Writers should be provided for test-taking if the student is unable to write (or give oral tests out of the earshot of other students).
6. Students may write slowly and need extended time for tests.
7. Develop a portfolio of the student's work, both singly and as part of a cooperating group. Orally quiz him/her to establish the extent to which the student contributed to the group-based accomplishments. (IDEA)

Educational Considerations (cont.)


1. GROUP WORK
2. Include student in open discussions.
3. Allow more time for the student to complete activities.
4. Use ramps and raised platforms for student's access.
5. Lower chalkboard (IDEA)




Transition in Adulthood

- Jobs available
- Marriage
- Higher education (depending on their condition)
- <http://www.youtube.com/watch?v=6wLnR7GJakY>






Technology



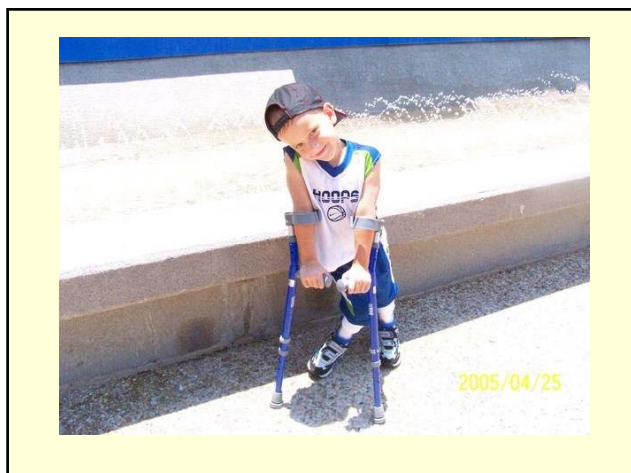
- Altered pencils and pens
- Altered keyboards (BAT)
- Powerpads
- Eye-controlled input systems (cyberlink)
- Touch screens
- Track ball
- Foot mice



- Standing table
- Easels
- Adjustable seats and desks
- Portable reading racks
- Speech-controlled input systems (dragon-dictate and write-away)
- Icon-driven communication (dynavox)

Spinal Cord Disorders – Spina Bifida

- Meet Bryce Lach:

Spina Bifida

- “A neural tube birth defect, is the improper closure of the protective tissue surrounding the spinal cord. It results in limited neurological control for organs and muscles controlled by nerves that originate below the level of the lesion. Increasing numbers of children have suffered traumatic head or spinal cord injuries resulting in permanent disabilities” (Smith 320)

References

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